Montana Fish, Wildlife & Parks

SPECIFICATIONS FOR WORK
SPECIAL PROVISIONS

Contents:

1. PROJECT DESCRIPTION

The Project involves construction work associated with:

Redwater River Fish Passage
Fish, Wildlife & Parks (FWP) project # 7163601
Located in McCone County, MT

This project generally consists of the removal of approximately 105 linear feet of a concrete low water crossing, and installing two 20 foot span arch culverts, along with replacing the concrete crossing.

2. PROJECT RELATED CONTACTS

Project contacts are designated as follows:

Owner:	Montana FWP 1420 E. Sixth Ave. PO Box 200701 Helena, MT 59620-0701
FWP Project Representative:	Jason Senn, P.E. FWP Project Manager 1522 9th Avenue Helena, MT 59620 406-841-4007 (wk) 406-431-4032 (cell) 406-841-4004 (fax)

3. SITE INSPECTION

All Bidders should satisfy themselves as to the construction conditions by personal examination of the site described in this document. Bidders are encouraged to make any - investigations necessary to assess the nature of the construction and the difficulties to be encountered, see General Conditions, Article 3.

4. SOILS INFORMATION

Geotechnical investigation work has not been done for this Project. It is the responsibility of the Bidders to conduct all investigations and determine the soil type and digging conditions that may be encountered with this Project prior to bid preparation, see General Conditions, Article 3.

5. PROJECT REPRESENTATIVE, INSPECTIONS, AND TESTING

The Contractor's work will be periodically tested and observed to insure compliance with the Contract Documents. Complete payment will not be made until the Contractor has demonstrated that the work is complete and has been performed as required. If the Project Representative detects a discrepancy between the work and the requirements of the Contract Documents at any time, up to and including final inspection, such work will not be completely paid for until the Contractor has corrected the deficiency, see General Conditions, Article 9.

The Project Representative will periodically monitor the construction of work to determine if the work is being performed in accordance with the contract requirements. The Project Representative does not have the authority or means to control the Contractor's methods of construction. It is, therefore, the Contractor's responsibility to utilize all methods, equipment, personnel, and other means necessary to assure that the work is installed in compliance with the Drawings and Specifications, and laws and regulations applicable to the work. Any discrepancies noted shall be brought to the Contractor's attention, who shall immediately correct the discrepancy. Failure of the Project Representative to detect a discrepancy will not relieve the Contractor of his ultimate responsibility to perform the work as required, see General Conditions, Article 3.

The Contractor shall inspect the work as it is being performed. Any deviation from the Contract requirements shall be immediately corrected. Prior to any scheduled observation by the Project Representative, the Contractor shall again inspect the work and certify to the Project Representative that he has inspected the work and it meets the requirements of the Contract Documents. The Project Representative may require uncovering of work to verify the work was installed according to the contract documents, see General Conditions, Article 12.

The work will be subject to review by the Project Representative. The results of all such observations, and all contract administration, shall be directed to the Contractor only through the Project Representative.

5.1 Services Required by the Contractor. The Contractor shall provide the following services:

a. Any field surveys to establish locations, elevations, and alignments as stipulated on the Contract Documents. FWP reserves the right to set preliminary construction staking for the project. The Contractor is responsible to notify FWP for any construction staking discrepancies.

b. Preparation and certification of all required shop drawings and submittals as described in the General Conditions, Article 3.

c. All testing requiring the services of a laboratory to determine compliance with the Contract Documents shall be performed by an independent commercial testing laboratory acceptable to the Project Representative. The laboratory shall be staffed

with experienced technicians properly equipped, and fully qualified to perform the tests in accordance with the specified standards.

d. Preparation and submittal of a construction schedule, including submittals, see General Conditions, Article 3. The schedule shall be updated as required, as defined in the Contract Documents.

e. All Quality Control testing as required by the Contractor's internal policies.

f. All Quality Assurance testing and/or re-testing as stated in the Contract Documents, see General Conditions, Article 13.

5.2 Services Provided by the Owner. The Owner shall provide the following services at no cost to the Contractor except as required for retests as defined in the Contract Documents.

a. The Project Representative may check compaction of backfill and surfacing courses using laboratory testing submittal information supplied by the Contractor. These tests are to determine if compaction requirements are being fulfilled in accordance with the Contract Documents. It is ultimately the responsibility of the Contractor to insure that this level of compaction is constant and met in all locations.

b. Any additional Quality Assurance testing deemed appropriate by the Owner, at the Owner's expense.

6. ENGINEERING INTERPRETATIONS

Timely Engineering decisions on construction activities or results have an important bearing on the Contractor's schedule. When engineering interpretation affects a plan design or specifications change, it should be realized that more than 24 hours may be required to gain the necessary Owner participation in the decision process including time for formal work directive, or change order preparation as required.

7. REJECTED WORK

Any defective work or nonconforming materials or equipment that may be discovered at any time prior to the expiration of the warranty period, shall be removed and replaced with work or materials conforming to the provisions of the Contract Documents, see General Conditions, Article 12. Failure on the part of the Project Representative to condemn or reject bad or inferior work, or to note nonconforming materials or equipment on the Contractors submittals, shall not be construed to imply acceptance of such work. The Owner shall reserve and retain all its rights and remedies at law against the Contractor and its Surety for correction of any and all latent defects discovered after the guarantee period (MCA 27-2-208).

Only the Project Representative will have the authority to reject work which does not conform to the Contract Documents.

8. UTILITIES

The exact locations of existing utilities that may conflict with the work are not precisely known. It shall be the Contractor's responsibility to contact the owners of the respective utilities and arrange for field location services. **One Call Locators, 1-800-424-5555**

The Contract Documents may show utility locations based on limited field observation and information provided to the Project Representative by others. **The Project Representative cannot guarantee their accuracy.** The Contractor shall immediately notify the Project Representative of any discrepancies with utility locations as shown on the Contract Drawings and/or their bury depths that may in any way affect the intent of construction as scoped in these specifications.

There will be no separate payment for exploratory excavation required to locate underground utilities.

8.1 Notification. The Contractor shall contact, in writing, all public and private utility companies that may have utilities encountered during excavation. The notification includes the following information:

a. The nature of the work that the Contractor will be performing.
b. The time, date and location that the Contractor will be performing work that may conflict with the utility.
c. The nature of work that the utility will be required to perform such as moving a power pole, supporting a pole or underground cable, etc.
d. Requests for field location and identification of utilities.

A copy of the letter of notification shall be provided to the Project Representative. During the course of construction, the Contractor shall keep the utility companies notified of any change in schedule, or nature of work that differs from the original notification.

8.2 Identification. All utilities that may conflict with the work shall be the Contractor's responsibility to locate before any excavation is performed. Field markings provided by the utility companies shall be preserved by the Contractor until actual excavation commences. All utility locations on the Drawings should be considered approximate and should be verified in the field by the Contractor. The Contractor shall also be responsible for locating all utilities that are not located on the Drawings.

Utilities are depicted on the Contract Documents in accordance with their achieved “Quality Levels,” as defined in the American Society of Civil Engineer’s Document, ASCE 38, “Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.” Reliance upon these data for risk management purposes during bidding does not relieve the Contractor, or Utility Owner from following all applicable utility damage prevention statutes,

policies, and/or procedures during construction. It is important that the Contractor investigates and understands the scope of work between the project Owner and Engineer regarding scope of limits of the utility investigations leading to these utility depictions. Definitions of Quality Levels are described as follows:

a. "QUALITY LEVEL A" – (QLA): LOCATING THROUGH EXCAVATION. QLA data are highly accurate and are obtained by surveying an exposed utility. As such, both horizontal and vertical data are recorded. Survey accuracies are typically set at 15mm (1/2-inch) vertically, and to project survey standards horizontally (typically the same as for topography features), although these survey accuracies and precisions are generally left to the owner to specify in a scope of work. In addition to the applicable standard of care and any other additional standards imposed by commercial indemnity clauses, the accuracy of these location data is also typically guaranteed. Other data typically characterized include material type, surface elevation, utility size/capacity, outside dimensions, and configurations, soil type, and utility condition.

b. "QUALITY LEVEL B" – (QLB): DESIGNATING. QLB information is obtained through the application of appropriate surface geophysical methods to identify the existence and approximate horizontal location of utilities (a utility's "designation") within the project limits, followed by survey, mapping, and professional review of that designation. Underground utilities are identified by interpretation of received signals generated either actively or passively, and through correlating these received signals with visible objects (QLC) and record data (QLD) to determine function. Designated utilities that can't be identified are labeled as "unknowns." Although approximate has no accuracy associated with it, generally the locations are within inches rather than feet. The more utility congested the area or the deeper the utilities, the less likely it is that the designations will achieve that accuracy. These designations are then surveyed to project accuracies and precisions, typically third-order accuracy similar to other topography features. Note that surveying existing one-call marks does not lead to QLB data, since the genesis of the marks was not under the direct responsible charge of the professional certifying the QLB depictions, and one-call generally does not address unknown utilities, privately owned utilities, utilities without records, abandoned utilities, and so on. Nor does the professional have knowledge of the field technician's qualifications, training, and level of effort.

c. "QUALITY LEVEL C" – (QLC): SURFACE VISIBLE FEATURE SURVEY. QLC builds upon the QLD information by adding an independent detailed topography site survey for surface-visible appurtenances of subsurface utilities including but not limited to fire

hydrants, valves, risers, and manholes. Professional judgment is used to correlate the QLD data to the surveyed features, thus increasing the reliability of both utility location and existence. It is a function of the professional to determine when records and features do not agree and resolve discrepancies. This may be accomplished by depiction of a utility line at quality level D, effectively bypassing or disregarding (but still depicting) a surveyed structure of unknown origin. Additional resolution may result from consultation with utility owners.

d. "QUALITY LEVEL D" – (QLD): EXISTING RECORDS RESEARCH. QLD is the most basic level of information. Information is obtained from the review and documentation of existing utility records, verbal accounts, and/or one-call markings (to determine the existence of major active utilities and their approximate locations).

8.3 Removal or Relocation of Utilities. All electric power, street lighting, gas, telephone, and television utilities that require relocation will be the responsibility of the utility owner. A request for extending the specified contract time will be considered if utility owners cause delays.

8.4 Public Utilities. Water, sewer, storm drainage, and other utilities owned and operated by the public entities shall, unless otherwise specifically requested by the utility owner, be removed, relocated, supported or adjusted as required by the Contractor at the Contractor's expense. All such work shall be in accordance with these Contract Documents, or the Owner's Standard Specifications or written instructions when the work involved is not covered by these Specifications.

8.5 Other Utilities. Utilities owned and operated by private individuals, railroads, school districts, associations, or other entities not covered in these Special Provisions shall, unless otherwise specifically requested by the utility owner, be removed, relocated, supported or adjusted as required by the Contractor at the Contractor's expense. All work shall be in accordance with the utility owner's directions, or by methods recognized as being the standard of the industry when directions are not given by the owner of the utility.

8.6 Damage to Utilities and Private Property. The Contractor shall protect all utilities and private property and shall be solely responsible for any damage resulting from his construction activities. The Contractor shall hold the Owner and Project Representative harmless from all actions resulting from his failure to properly protect utilities and private property. All damage to utilities shall be repaired at the Contractor's expense to the full satisfaction of the owner of the damaged utility or property. The Contractor shall provide the Owner with a letter from the owner of the damaged utility or property stating that it has been repaired to the utility owner's full satisfaction.

8.7 Structures. The Contractor shall exercise every precaution to prevent damage to existing buildings or structures in the vicinity of his work. In the event of such damages, he shall repair them to the satisfaction of the owner of the damaged structure at no cost to the Owner.

8.8 Overhead Utilities. The Contractor shall use extreme caution to avoid a conflict, contact, or damage to overhead utilities, such as power lines, streetlights, telephone lines, television lines, poles, or other appurtenances during the course of construction of this project.

8.9 Buried Gas Lines. The Contractor shall provide some means of overhead support for buried gas lines exposed during trenching to prevent rupture in case of trench caving.

8.10 Pavement Removal. Where trench excavation or structure excavation requires the removal of curb and gutter, concrete sidewalks, or asphalt or concrete pavement, the pavement or concrete shall be cut in a straight line parallel to the edge of the excavation by use of a spade-bitted air hammer, concrete saw, colter wheel, or similar approved equipment to obtain a straight, square clean break. Pavement cuts shall be 2 feet wider than the actual trench opening.

8.11 Survey Markers and Monuments. The Contractor shall use every care and precaution to protect and not disturb any survey marker or monuments, such as those that might be located at lot or block corners, property pins, intersection of street monuments or addition line demarcation. Such protection includes markings with flagged high lath and close supervision. No monuments shall be disturbed without prior approval of the Project Representative. Any survey marker or monument disturbed by the Contractor during the construction of the project shall be replaced at no cost to the Owner by a licensed land surveyor.

8.12 Temporary Utilities. The Contractor shall provide all temporary electrical, lighting, telephone, heating, cooling, ventilating, water, sanitary, fire protection, and other utilities and services necessary for the performance of the work. All fees, charges, and other costs associated therewith shall be paid for by the Contractor.

9. CONSTRUCTION SAFETY

The Contractor shall be solely and completely responsible for conditions of the jobsite, including safety of all persons (including employees and subcontractors) and property during performance of the work. This requirement shall apply continuously and not be

limited to normal working hours. Safety provisions shall conform to U.S. Department of Labor (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, and regulations. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve them from compliance with the obligations and penalties set forth therein, see General Conditions, Article 10.

10. CONSTRUCTION LIMITS AND AREAS OF DISTURBANCE

10.1 Construction Limits. Where construction easements or property lines, are not specifically called out on the Contract Documents, limit the construction disturbance to ten (10) feet, when measured from the edge of the slope stake grading, or to the adjacent property line, whichever is less. Disturbance and equipment access beyond this limit is not allowed without the written approval of both the Project Representative and the Owner of the affected property. If so approved, disturbance beyond construction limits shall meet all requirements imposed by the landowner; this includes existing roads used and/or improved as well as the construction of new access roads. Special construction, reclamation, or post-construction reclamation or other closure provisions required by the landowner on access roads beyond the construction limits shall be performed by the Contractor at no additional cost to the Owner.

10.2 Areas of Disturbances. Approved areas of disturbance are those areas disturbed by construction activities within the construction limits and along designated or approved access routes. Such areas may require reclamation and revegetation operations, including grading to the original contours, top soiling with salvaged or imported topsoil, seeding, fertilizing, and mulching as specified herein. Other areas that are disturbed by the Contractor's activities outside of the limits noted above will be considered as site damage or unapproved areas of disturbance, see General Conditions, Articles 3 and 10. This includes areas selected by the Contractor outside the defined construction limits for mobilization, offices, equipment, or material storage.

11. DECONTAMINATE CONSTRUCTION EQUIPMENT

Power wash all construction equipment entering the project site to prevent the spread of noxious weeds and aquatic invasive species. This applies to all FWP projects, whether or not individual construction permits specifically address cleaning of equipment.

12. TREE PROTECTION AND PRESERVATION

The Contractor and the Owner shall individually inspect all trees within the project construction limits prior to construction. The Owner shall determine which trees are to be removed and which trees are to be preserved. Construction of the grading, utilities and various roadway facilities must not significantly damage the trees root system or hinder it's chances for survival. Reasonable variations from the Contract Documents,

as directed by the Project Representative, may be employed to ensure the survival of trees.

13. CONSTRUCTION SURVEYS

The Contractor will be responsible for all layout and construction staking utilizing the Project Representative's existing control and coordinate data for the project. Dimensions and elevations indicated in layout of work shall be verified by the Contractor. Discrepancies between Drawings, Specifications, and existing conditions shall be referred to the Project Representative for adjustment before work is performed. The Project Representative may set location and grade stakes prior to construction; however, it is ultimately the responsibility of the Contractor to check and verify all construction staking for the project.

Existing survey control (horizontal and vertical) has been set for use in the design and ultimately the construction of these improvements. A listing of the coordinates and vertical elevation for each of these control points may be included in the project drawings.

The Contractor will be responsible for preserving and protecting the survey control until proper referencing by the Contractor has been completed. Any survey control obliterated, removed, or otherwise lost during construction will be replaced at the Contractor's expense.

Contractor shall be aware of property pins and survey monuments. Damage to these pins will require replacement of such by a registered land surveyor at no cost to the owner.

The Contractor shall provide construction staking from the Contractor's layouts and the control points. Contractor's construction staking includes at a minimum:

1. Slope stakes located at critical points as determined by the Project Representative.
2. Blue tops every longitudinally and transversely for subgrade and crushed base to verify finish grading of course.
3. Location and grade stakes for drainage features and retaining walls.
4. Location stakes for roadside safety items, permanent and temporary traffic control, and misc. items as determined by the Project Representative.

Original field notes, computations and other records take by the Contractor for the purpose of quantity and progress surveys shall be furnished promptly to the Project Representative and shall be used to the extent necessary in determining the proper amount of payment due to the Contractor.

14. MATERIAL SOURCES AND CONSTRUCTION WATER

The Contractor shall be responsible for locating all necessary material sources, including aggregates, earthen borrow and water necessary to complete the work. The Contractor shall be responsible for meeting all transportation and environmental regulations as well as paying any royalties. The Contractor shall provide the Project Representative with written approvals of landowners from whom materials are to be obtained, prior to approval.

The Contractor may use materials from any source, providing the materials have been tested through representative samples and will meet the Specifications.

Water for compaction efforts shall be supplied by the Contractor.

15. MATERIALS SALVAGE AND DISPOSAL

Notify the Owner for any material salvaged from the project site not identified in the Contract Documents. The Owner reserves the right to maintain salvaged material at the project site, compensate the Contractor for relocation of salvaged material, or agreed compensation to Owner for material salvaged by the Contractor.

Haul and waste all waste material to a legal site and obey all state, county, and local disposal restrictions and regulations.

16. STORED MATERIALS

Contractor shall use an approved storage area for materials. Materials and/or equipment purchased by the Contractor may be compensated on a monthly basis. For compensation, provide the Project Representative invoices for said materials, shop drawings and/or submittals for approval, and applicable insurance coverage, see General Conditions, Article 9.

17. STAGING AND STOCKPILING AREA

Contractor shall use staging and stockpiling sites for to facilitate the project as approved by the Owner. Contract Documents may show approved staging and stockpiling locations. Notify Owner within 24 hours for approval of staging and stockpiling sites not shown on the Contract Drawings.

18. SECURITY

The Contractor shall provide all security measures necessary to assure the protection of equipment, materials in storage, completed work, and the project in general.

19. CLEANUP

Cleanup for each item of work shall be fully completed and accepted before the item is considered final. If the Contractor fails to perform cleanup within a timely manner the Owner reserves the right to withhold final payment.

Review these Contract Documents for additional Final Cleanup specifications for specific measures, associated with Contractor responsibilities and final payment.

20. ACCESS DURING CONSTRUCTION

Provide emergency access at all times within the project throughout the construction period.

21. CONSTRUCTION TRAFFIC CONTROL

The Contractor is responsible for providing safe construction and work zones within the project limits by implementing the rules, regulations, and practices of the Manual on Uniform Traffic Control Devices, current edition.

22. SANITARY FACILITIES

Provide on-site toilet facilities for employees of Contractor and Sub-Contractors and maintain in a sanitary condition.

23. CONTRACT CLOSEOUT

The Contractor's Superintendent shall maintain at the project site, a "Record Set of Drawings" showing field changes, as-built elevations, unusual conditions encountered during construction, and such other data as required to provide the Owner with an accurate "as constructed" set of record drawings. The Contractor shall furnish the "Record Set" to the Project Representative following the Final Inspection of the Project.

The Contractor's final payment will not be processed until the "Record Set" of drawings are received and approved by the Project Representative.

24. MEASUREMENT AND PAYMENT

Review these Contract Documents for additional Measurement and Payment specifications for definitions. Quantities are listed on the Bid Proposal for Payment Items. Additional material quantities, volumes, and measurements may be shown on the Contract Document drawings and/or specifications.

Unit Price quantities and measurements shown on the Bid Proposal are for bidding and contract purpose only. Quantities and measurements supplied, completed for the project, and verified by the Project Representative shall determine payment. Each unit

price will be deemed to include an amount considered by the Contractor to be adequate to cover Contractor's overhead and profit for each bid item.

The Owner or Contractor may make a Claim for an adjustment in Contract Unit Price if the quantity of any item of Unit Price Work performed by the Contractor differs materially and/or significantly (increase or decrease by 50%) from the estimated quantity indicated on the Bid Proposal.

Lump sum bid item quantities will not be measured. Payment for these lump sum bid proposal items will be paid in full amount listed on the Bid Proposal when accepted by the Project Representative, unless specified otherwise.

TECHNICAL SPECIFICATIONS

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1. DESCRIPTION

The Redwater Fish Passage Project is located on the Redwater River in McCone County, Montana about 22 miles east of the City of Wolf Point. The diversion structure is located at latitude 48.054225° and longitude, -105.214589°. A low water crossing was installed with 4 culverts that are too high above the water lever to allow for adequate fish passage. The project goal is to remove the low water crossing and install (2)-20 foot wide spans that will allow for adequate fish passage. The installation of the new crossing will provide fish passage for select warm water species, and open nearly 70 miles of river for fish habitat and spawning.

The Redwater Fish Pasage Project consists of removal and disposal of a concrete low water crossing structure on the Redwater River, including concrete drive path, footing and abutments, and (4) 24" CMP culverts. The work will also entail the purchase and placement of (2) 20 foot wide Contech i-series structures, along with the replacement of the concrete drive path over the low water crossing.

The work will be divided between the Contractor and the Owner. Work to be completed by the Owner includes:

- Acquiring the Permits Listed in the Specifications.

The bid will be awarded based on the BASE BID and, potentially, any combination of ALTERNATE BIDS that is determined to be within FWP's budget and in the best interests of FWP.

1.2. MATERIAL SUPPLIED BY OWNER
No material will be supplied by the Owner.

1.3. FIELD QUALITY CONTROL
A. The Owner's Representative will perform periodic site visits to inspect work, direct placement of certain project elements and provide confirmation of crucial design elements.
B. Specifications and drawings included in these contract documents establish the performance and quality requirements and establish minimum standards for workmanship and appearance.

1.5. MEASUREMENT AND PAYMENT
Measurement and payment for all bid items included in the Proposal shall be in accordance with the method of measurement and basis of payment described in the various sections of the Specifications.
The total bid price for each item of the contract shall cover all work required by the specifications and other contract documents. All costs in connection with the work, including

furnishing all materials, equipment, supplies and appurtenances; providing all construction plant, equipment, and tools; and performing all necessary labor and supervision to fully complete the work, shall be included in the unit and lump sum prices bid. No item that is required by the Contract Documents for the proper and successful completion of work will be paid for outside of, or in addition to, the prices submitted in the bid. All work not specifically set forth as a pay item in the Bid Form shall be considered a subsidiary obligation of the Contractor, and all costs in connection therewith shall be included in the prices bid. Bid items shall not be considered for payment until all work associated with the bid item is completed. This work may include, but is not limited to, backfilling and cleanup.

All estimated quantities stipulated in the Proposal or other contract documents are approximate and are to be used only (a) as a basis for estimating the probable cost of the work, and (b) for the purpose of comparing the bids submitted for the work. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of work done and materials furnished, as measured by the Engineer. The Contractor agrees that he will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts herein.

Either the Owner or the Contractor may demand in writing that a supplemental agreement or change order be prepared to authorize an adjustment in the unit price of any Major Contract item if the quantity of said Major Contract item increases or decreases by more than 25 percent from that shown in the Contract Documents. A Major Contract item is defined as any item having an original contract value in excess of 10 percent of the total original contract (all schedules included together).

SECTION 01300

SUBMITTALS

PART 1: GENERAL

1.1 DESCRIPTION
This Section outlines in general the items the Contractor must prepare or assemble for submittal prior to and during the progress of the work. There is no attempt herein to state all of the procedures and requirements for each submittal. The Contractor's attention is directed to the individual Specification Sections that may contain in detail additional and special submittal requirements. The Owner’s Representative reserves the right to direct and modify the procedures and requirements for submittals as necessary to accomplish the specific purpose of each submittal. Should the Contractor be in doubt as to the procedure, purpose, or extent of any submittal, he should direct his inquiry to the Owner’s Representative.
The Contractor will furnish Submittals for any and all such parts of the Work as set forth in the Specifications. The procedures for review of the submittals will be as follows:

1. The contractor will submit to the owner’s representative for his review, sets of drawings, material specifications, or requests for information. Contractor will submit these documents electronically to the Owner’s Representative at jsenn@mt.gov.

2. When a drawing or material specification is satisfactory to the Owner’s Representative, one electronic version will be returned to the Contractor and will be dated and marked, "Approved as Corrected" or "Approved as Submitted".

3. Should a drawing or material specification be unsatisfactory to the Owner’s Representative, he will mark thereon "Revise and Resubmit", or "Rejected", and will return one electronic version to the Contractor with the necessary corrections and changes indicated. The Contractor must make such corrections and changes, and again submit the drawings or specifications for approval. The Contractor will revise and resubmit the working drawings or specifications until satisfactory review by the Owner’s Representative is obtained.

4. The Contractor will allow sufficient time for preliminary review, correction, resubmission, and final review of all working (shop) drawings. Drawings of items critical to job progress will be given priority review by the Owner’s Representative.

PART 2: PRODUCTS – NOT USED

PART 3: EXECUTION

3.1 GENERAL
Items for which submittals will be required include but are not limited to:
1. Plans
Plan Section
Overall Construction Schedule 02100
Control of Water Plan 02230

3.2 SAMPLES AND TEST SPECIMENS

Where required in the Specifications, and as determined necessary by the Owner's Representative, test specimens or samples of materials to be used or offered for use in connection with the Work will be submitted to the Owner's Representative, at the Contractor's expense, with information as to their sources, with all cartage charges prepaid, and in such quantities and sizes as may be required for proper examination and tests to establish the quality or equality thereof, and to determine conformance to the Specifications as applicable.

All samples and test specimens will be submitted in ample time to enable the Owner's Representative to make any tests or examinations necessary without delay to the work. The contractor will be held responsible for any loss of time due to his neglect or failure to deliver the required samples and test specimens to the Owner's Representative, as specified.

The contractor will submit additional samples and test specimens as required by the Owner's Representative to assure equality with the original approved sample and/or for determination of specification compliance.

3.3 RECORD DRAWINGS

The Contractor will maintain one set of Plans on the jobsite, designated "Record Drawings". The contractor will contemporaneously maintain the Record Drawings in a condition that reflects the current status of the construction work. The Record Drawings will be available to the Owner's representative for inspection and copying during the progress of the work. All markings will be neatly performed with red pencil.

The Record Drawings will be marked up as required to show all deviations from the original contract drawings including changes resulting from minor field adjustments, field orders, and contract modifications. Changes should be drawn after the respective construction work is completed and all new locations, dimensions, and elevations will be shown. Where larger scale presentation is required, the Contractor will prepare additional drawings and attach them to the appropriate prints.

At the completion of the work but before Substantial Completion, the Record Drawings will be submitted to the Owner's Representative.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

No measurement will be made for Submittals.

4.2 PAYMENT

The work specified in this Section will be considered incidental and no separate payment will be made for Submittals.

SECTION 02100

SCHEDULE AND SEQUENCE OF OPERATIONS

PART 1: GENERAL

1.1 DESCRIPTION
The work will be performed at such times and in or on such parts of the project and with such forces, materials and equipment to prevent any delay to the completion of the project within the time limits stated in the Contract and in conformance with the Overall Construction Schedule specified herein.

1.2 PRE BID CONFERENCE
A pre bid conference will be held at the location and the time identified in the Invitation to Bid. The pre bid conference is not mandatory but is recommended.

1.3 PRECONSTRUCTION CONFERENCE
Before beginning the work and after the Contract has been awarded, the Owner's Representative will conduct a Preconstruction Conference to discuss the Contractor's schedules and the contractor's procedures, development of a plan for site protection and reconstruction, contractor's use of the site, Owner's regulations, regulatory permit requirements, landowner requests, and other matters deemed relevant to the effective performance of the work. The conference will be attended by the Contractor's Authorized Representative and any subcontractor's or supplier's representatives whom the Contractor may desire to invite or the owner's representative may request.

1.4 PROJECT DURATION
The project will have a 45-day duration based on calendar days.

PART 2: PRODUCTS – NOT USED

PART 3: EXECUTION

3.1 OVERALL CONSTRUCTION SCHEDULE
All work associated with this project shall not occur earlier than September 6th.
Construction may be delayed based on weather conditions. **To protect access roads (Nickwall Road), construction will limited during wet periods. Hauling materials in and out of the site along Nickwall Road shall not occur during wet periods.**

3.2 SEQUENCING
Construction activities will take place in a sequence determined by the Contractor. Specific sequencing requirements are included in the specifications.

3.3 SUBMITTALS
The Contractor will prepare and submit to the Owner's Representative, within 7 days after the

Notice to Proceed, his Overall Construction Schedule (Overall Schedule). The Overall Schedule will be comprised of preparatory and construction operations covering all work to be done in connection with the Contract. The Overall Schedule will include:

1. Anticipated project start and end date
2. Implementation and maintenance of Erosion Control measures
3. Implementation of Control of Water measures
4. Main construction phases
5. Dates of Seeding

The Contractor will submit to the Owner's Representative a revised and updated Overall Schedule, based on work progress to date, every two weeks after the construction has commenced (on the 1st and 16th of each month following the initial submittal of the Overall Schedule). The revised Overall Schedule will be submitted to the Owner's Representative in electronic format.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

No measurement will be made of activities associated with Schedule and Sequence of operations.

4.2 PAYMENT

No payment will be made for Schedule and Sequence of Operations.

SECTION 02110

MOBILIZATION

PART 1: GENERAL

1.1 DESCRIPTION
This section covers the work necessary to mobilize and demobilize for the construction including, but not limited to, providing bonds, insurance, permits, and licenses; setting up and taking down temporary sanitary facilities; moving equipment and materials to and from the site; and preparation of the site for construction as specified and shown on the Plans.

PART 2: PRODUCTS

2.1 GENERAL
The Contractor will provide all temporary facilities required for performing the work. Temporary construction facilities are solely the Contractor's responsibility based on his selected method of operation and schedule.

PART 3: EXECUTION

3.1 GENERAL
Set up construction facilities in a neat and orderly manner within areas designated by the Owner. Accomplish all required work in accordance with applicable portions of these specifications, or as approved. Confine operations to the approved work area. Remove all construction facilities and return the areas used for that purpose to the original condition, including, as necessary, clean-up, material removal, soil de-compaction, and installation of erosion control measures, as directed and approved by the Owner.

3.2 EQUIPMENT CONDITION
A. All equipment will be in good working condition in order to minimize the risk of major component failure while working within the stream or lake. The Contractor will take all reasonable practices to protect the river as the work is being completed.

B. As a means of preventing the introduction of undesirable vegetation (noxious weeds) to the project site, as well as preventing the introduction of oil and grease to the river, all heavy equipment working within the project area will be steam cleaned prior to entering the project area. Personal vehicles will be parked in an area where soils are not disturbed. Vehicles transporting materials to the site are exempt from this requirement.

C. All equipment on-site will be inspected daily for any fluid leakage prior to entering the stream.

D. Any leakage found will be repaired before the piece of equipment is allowed to return to work.
E. Any fluid leakage within the river will be reported to the proper authorities. If any spillage or environmental contamination occurs as a result of Contractor negligence, the Contractor will

provide clean-up to the satisfaction of all permitting authorities at no additional cost to the Owner.

F. All refueling and maintenance will be performed outside of the river.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT
No measurement will be made for Mobilization.

4.2 PAYMENT
Payment for the work specified in this section will be made based on the lump sum amount stated in the Bid. Payment for 80% of the amount of this bid item will be made following implementation of mobilization and setup activities. Payment for the remaining 20% of the amount for this bid item will be made following completion of demobilization and cleanup activities and submittal of Record Drawings to Owner's Representative.

SECTION 02112

CONSTRUCTION STAKING

PART 1: GENERAL

1.1 DESCRIPTION

This specification covers the furnishing of all labor, materials, tools and equipment necessary to perform construction staking. The Owner will be responsible for one-time initial construction staking. The Contractor will be responsible for any additional staking required and for replacing stakes removed, damaged or destroyed due to Contractor activities at no cost to the Owner.

PART 2: PRODUCTS

2.1 GENERAL

Wooden stakes and lath for reference staking will be labeled with the appropriate information (station, elevation, location, etc.). Plastic flagging will be brightly colored or fluorescent plastic ribbon securely tied to the survey stake. Plastic flagging that becomes faded, torn or dislodged will be replaced at the Contractor's expense. Paint, when used in lieu of plastic flagging to mark survey stakes, will be brightly colored or fluorescent to be visible from passing equipment. Paint that becomes faded will be remarked or reset at the Contractor's expense.

PART 3: EXECUTION

3.1 GENERAL

The Owner will provide one-time staking of alignments and other key features as described in Section 3.2. The Contractor is responsible for providing any additional staking or re-setting of disturbed stakes. All errors and discrepancies found on the construction stakes, plans, or specifications will be called to the attention of the Owner's Representative by the Contractor prior to proceeding with further survey and construction work. Any deficient survey layout or staking performed by the contractor, or any unreported errors in previous surveys that may result in construction errors, will be corrected by the Contractor at no additional cost to the Owner.

3.2 CONSTRUCTION STAKING PROVIDED BY OWNER

The alignment and grade of the low water crossing will be staked. Staking points consisting of wooden stakes will be provided.

3.3 SURVEY CONTROL

Survey control benchmark locations and coordinates are provided on Plan Sheet 4. The contractor will protect survey control benchmarks. The Contractor is responsible for re-setting of disturbed benchmarks.

3.4 SURVEY TOLERANCES

Tolerances for earthwork and bank restoration will be ± 1 foot horizontal and ± 0.1 feet vertical.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

No measurement will be made for Construction Staking.

4.2 PAYMENT

Construction Staking will be considered incidental to other work items. No payment will be made for Construction Staking.

SECTION 02115

SITE ACCESS AND STAGING AREAS

PART 1: GENERAL

1.1 DESCRIPTION
The Work covered by this Section includes the furnishing of all labor, materials, equipment and incidentals for construction, installation, protection and maintenance and reclamation of:
1. Site Access; and
2. Staging Areas

PART 2: PRODUCTS

2.1 DESCRIPTION
If necessary, the Contractor will provide road surface material at the approval of the Owner.

PART 3: EXECUTION

3.1 GENERAL
At a minimum, the site access and staging areas will include appropriate standard erosion control best management practices (BMPs).

3.2 SITE ACCESS
Access to the project site is provided via Nickwall Road.

3.3 SITE ACCESS IN NON-ROADED AREAS
A. The Contractor will provide methods to install, maintain, and remove the Site Access in Non-Roaded Areas so as to minimize impact to the surrounding landscape.
B. Contractor will be responsible for maintaining function of the Site Access in Non- Roaded Areas during use.
C. The Contractor will be responsible for maintaining site drainage during construction and restoration while Site Access in Non-Roaded Areas is used.
D. Upon completion of the project, the Contractor will be responsible for removing the Site Access in Non-Roaded Areas and returning the area to a natural state. The
Contractor will remove the access road materials, dispose of the access road materials, apply topsoil, and re-grade the areas to match the existing grade according to the Specifications.

3.4 STAGING AREAS
A. The Contractor will provide methods to install, maintain, and remove the Staging Areas so as to minimize impact to the surrounding landscape.
B. Contractor will be responsible for maintaining function of the Staging Areas during use.
C. The Contractor will be responsible for maintaining site drainage during construction and restoration while the Staging Areas are used.
D. The location and dimensions of the Staging Areas will be within the area marked on the Plans that depicts the limits of disturbance.

E. Upon completion of the project, the Contractor will be responsible for removing the Staging Areas and returning the areas to a natural state. The Contractor will scarify the surface (harrow rake) and apply seed.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT
No measurement will be made for Site Access and Staging Areas.

4.2 PAYMENT
No Payment will be made of activities associated with Site Access and Staging Areas. The cost for Site Access and Staging Areas is incidental to Mobilization.

SECTION 02116

RIVER INGRESS/EGRESS

PART 1 GENERAL

1.1. DESCRIPTION
A. This work consists of locating, building, removing and reclaiming ingress and egress areas and associated temporary access to the Redwater River. This work also consists of any temporary access roads constructed within the river channel.

PART 2 MATERIAL – NOT USED

PART 3 EXECUTION

3.1. GENERAL
A. The Contractor has the option to construct a single egress point on each side of the river within designated areas shown on Plan Sheet 2. The Contractor will provide a plan for ingress/egress locations to the Owner's Representative prior to initiation of the work.
B. Each ingress/egress location will be a maximum disturbance width of 40 feet generally measured perpendicular to the river channel.
C. Each ingress/egress point will be situated in a position designed to minimize ecological impacts such as bank destabilization and vegetation destruction. Trees with trunk diameters over six inches may not be removed nor roots disturbed without approval of the Owner's Representative.
D. The Contractor will provide suitable erosion control measures to minimize bank erosion during construction in accordance with project permits. Once work is complete, the Contractor will be responsible for reclaiming the ingress/egress locations in accordance with the Plans and permits. The Contractor will remove all non-biodegradable erosion control measures upon final stabilization in accordance with the project permits. Biodegradable erosion control measures will be left in place unless directed otherwise by the Owner's Representative.
E. In the event of a conflict between the Plans or Specifications and applicable permits, the more stringent of the two will apply.

PART 4 MEASUREMENT AND PAYMENT

4.1. MEASURE
A. No measurement will be made for River Ingress/Egress.

4.2. PAYMENT
A. No payment will be made for River Ingress/Egress. The cost of constructing ingress and egress to the river will be included in the cost of demolition. The cost of reclaiming the ingress and egress locations will be included in Reclamation. The cost of seeding the ingress and egress locations will be included in Seeding.
END OF SECTION

SECTION 02210

PROTECTION OF THE ENVIRONMENT

PART 1: GENERAL

1.1 DESCRIPTION
This Work consists of protecting existing soils and subsoils, ground topography and drainage, herbaceous and woody vegetation, and fish and wildlife during the implementation of the project.

PART 2: PRODUCTS – NOT USED

PART 3: EXECUTION

3.1 GENERAL
To mitigate potential impacts to the environment, the Contractor will use appropriate erosion control practices on the site. The following general practices will be employed, where applicable:
A. The smallest practical area of land will be exposed at any given time through construction scheduling. The duration of such exposure before application of temporary erosion control measures or final revegetation will be as short as practicable.
B. Proceed carefully with construction adjacent to stream channels to avoid washing, sloughing, or deposition of materials into the stream.
C. Avoid removal of trees and surface vegetation wherever possible.
D. Take measures to prevent erosion from spoil or topsoil stockpiles such as covering with tarpaulins, or plastic.
E. No construction, except for that associated with erosion control measures, will occur when excessive precipitation is expected in the immediate future, during periods of heavy precipitation or high stream flow.
F. Erosion control measures must be in place at the end of each working day.
G. Periodic inspection, repair, and maintenance of erosion control measures are required until the project is completed. Inspection and maintenance must occur after each rain event exceeding ½ inch rainfall or at least once each week.
H. Contractor must allow free and unlimited access to the project site at any time to any regulatory agency employee investigating the project's construction, operation or maintenance.
I. Construction related disturbance is anticipated to be less than 1-acre. If contractor calculates disturbance limits to exceed 1 acre, Owner will be notified. The Owner will apply for the Montana Department of Environmental Quality (MDEQ) General Permit for Stormwater Discharges Associated with Construction Activity (NOI and SWPPP). Pumped dewatering operations are not an anticipated component of the project. However, if pumped dewatering operations are undertaken, all purge water from dewatering operations will be land applied to the same aquifer from which the water was taken. If sediment-laden water is land-applied and will not reach state water, then a discharge permit is not required (e.g. sediment-laden water will infiltrate into the ground or be used for irrigation through a sprinkler system). If the Contractor desires to route purge water to surface water, a Construction Dewatering Discharge Permit must be obtained from MDEQ. It will be the Contractor’s responsibility to apply for a Construction

Dewatering Discharge Permit. No payment will be made to Contractor for obtaining and complying with this permit. Permit application fee is approximately $900 or as specified by MDEQ, and the estimated processing time is 10 to 30 days. Refer to the following website for information about the permit: http://deq.mt.gov/wqinfo/MPDES/ConstructionDewatering.mcpx. The Owner will obtain the Floodplain Development Permit, Montana Stream Protection Act (124), Montana Department of Environmental Quality (318), and Federal Clean Water Act (404) permits. The Contractor will familiarize himself with the conditions of the permits and will comply with the conditions of these permits. Contractor will keep a copy of all permits and approved plans at the project site at all times until the project is completed. The Contractor will minimize disturbance of all roads used to provide equipment, material and labor access to the project site. Any road damage resulting from Contractor operations will be repaired by the Contractor, at no expense to the Owner, prior to issuance of Substantial Completion.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT
No measurement will be made of activities associated with Protection of the Environment.

4.2 PAYMENT
No payment will be made of activities associated with Protection of the Environment.

SECTION 02220

EROSION CONTROL

PART 1: GENERAL

A. DESCRIPTION
The Work covered by this section includes the furnishing of all labor, materials, equipment and incidentals for construction and installation of:
1. Erosion Control Fabric on disturbed ground surfaces. Note – Erosion Control Fabric is a provisional Bid Item to be placed at locations directed by the Engineer; and
2. Straw Wattle along the contours of slopes. Note – Straw Wattle is a provisional bid item to be placed at locations directed by the Engineer.

PART 2: PRODUCTS

2.1 STRAW WATTLE
Straw Wattles are elongated tubes of compacted straw and/or other fibers that are installed along contours or at the base of slopes to help reduce soil erosion and retain sediment. They function by shortening slope length, reducing runoff water velocity, trapping dislodged soil particles and ameliorating the effects of slope steepness.
A. STRAW WATTLE MATERIAL PROPERTY REQUIREMENTS
Straw Wattles will be a rice or wheat straw-filled tube of flexible netting material exhibiting the following properties. It will be a machine-produced tube of compacted rice or wheat straw that is Certified Weed Free Forage, by a manufacturer whose principle business is wattle manufacturing. The netting will consist of natural fibers (such as coir, burlap or cotton). Straw Wattle with plastic netting is not acceptable.
Wattle Thickness 8 in. (min)
Wattle Length 10 ft. or greater
Fiber Content Rice or wheat straw
Mass per Unit Weight 1.5 lbs/lf (min)
B. PREAPPROVED PRODUCTS
Straw Wattle will be Earth Saver® Rice Straw Wattle (EE0825BRP-10 or EE0810BRP-24) with natural fiber (burlap) netting or approved equal. Straw Wattle with plastic netting is not approved. Do not order, deliver, or install other products without the written approval of the Owner's Representative.
C. SUBMITTALS
Contractor will provide the following submittals.
1. Name, address, and phone number of supplier(s) of the Straw Wattle used on the project.
2. Technical Specification of the Straw Wattle with associated testing standards.
3. Documentation of equivalency to products specified.
4. Manufacturer's shipping, storing, and placement recommendations.
2.3 WOODEN STAKES
Fabric stakes will be wooden stakes 12 inches long and 1 inch by 0.75 inches in diameter, or other dimensions as approved by the Owner's Representative. Fabric stakes will not be treated with preservative. Other types of stakes will be subject to the approval of the Owner's Representative. Metal pins or staples are not acceptable. Preapproved stakes are Wooden Pegs

from Rolanka International (www.rolanka.com) as long as they meet the dimension and length requirements in these specifications.

PART 3: EXECUTION

3.1 STRAW WATTLE

A. This section describes the installation of Straw Wattle on slope contours.

B. Proper site preparation is essential to ensure complete contact of the Straw Wattle with the soil.

C. The slope should be prepared to receive the surface mulching/re-vegetation treatment prior to installation of the Straw Wattle.

D. Remove all rocks, clods, vegetation or other obstructions so that the installed Straw Wattles will have direct contact with the soil.

E. Straw Wattle will be placed along the contours on disturbed slopes according to the following:

a. About 20 feet (diagonal or slope distance) apart on slopes between 3:1 and 2:1;

b. About 10 feet apart on slopes greater than 2:1; and

c. According to the Owner's Representative.

F. Excavate a small trench (2-3 inches) in depth on the slope contour and perpendicular to water flow. Soil from the excavation should be placed down-slope next to the trench.

G. Install the Straw Wattles in the trench, insuring that no gaps exist between the soil and the bottom of the Straw Wattle. The ends of adjacent Straw Wattles should be tightly abutted so that no opening exists for water or sediment to pass through. Alternately, Straw Wattles may be lapped, 6 inches minimum to prevent sediment passing through the field joint.

H. Wooden stakes should be used to fasten the Straw Wattles to the soil. When conditions warrant, a straight metal bar can be used to drive a pilot hole- through the Straw Wattle and into the soil.

I. Wooden stakes should be placed 6 inches from the Straw Wattle end angled towards the adjacent Straw Wattle and spaced at 4 feet centers 1-2 inches of stake exposed above the Straw Wattle. Alternately, stakes may be placed on each side of the Wattle tying across with a natural fiber twine or staking in a crossing manner ensuring direct soil contact at all times.

J. Terminal ends of Straw Wattles may be dog legged up slope to ensure containment and prevent channeling of sedimentation.

K. Care will be taken during installation so as to avoid damage occurring to the Straw Wattle as a result of the installation process. Should the Straw Wattle be damaged during installation, a wooden stake will be placed either side of the damaged area terminating the log segment.

L. Any Straw Wattle damaged during placement will be replaced as directed by the Owner's Representative, at the Contractor's expense.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. No measurement will be made for Site Access and Staging Areas.

4.2 PAYMENT

A. No Payment will be made of activities associated with Erosion Control. The cost for Erosion Control is incidental to Mobilization.

SECTION 02230

CONTROL OF WATER

PART 1: GENERAL

1.1 DESCRIPTION

The work covered by this section includes provisions to be considered by the Contractor to design, control, handle, and dispose of surface water and groundwater, and all other water that may be encountered, as required for performance of the work. The Contractor will be responsible for the continuous control of water at all times during the course of earthwork and structure installation, and will provide adequate backup systems to accomplish control of water. The method of control, handling, and disposal of groundwater and surface water will be by whatever means are necessary and in conformance with this specification to obtain satisfactory working conditions and to maintain the progress of the work. All required drainage, pumping and disposal will be done without damage to adjacent property. The Contractor will modify the water control system at his own expense if, after installation and while in operation, fails to function or it causes or threatens to cause damage to adjacent property.

Control of water includes three aspects to facilitate diversion structure demolition and bank restoration:

1. Control of water for structure demolition does not require that demolition occur in dry or dewatered conditions. Rather, control of water will be undertaken if and where required to minimize riverbank erosion at ingress and egress routes and temporary access roads and to maintain the function and efficiency of the project implementation;
2. Diversion of river flow to allow for the placement of the Contech i-series spans.

3. Controlling any and all groundwater, surface water and storm water. Stream flow varies based on a number of conditions including but not limited to upstream irrigation diversions and return flows, snowmelt and rainfall conditions. The USGS stream gage “06177825 Redwater River near Vida, MT” (http://waterdata.usgs.gov/mt/nwis/dvstat/?referred_module=sw&site_no=06177825&por_06177825_1=65635,00060,1,1975-10-01,2014-06-30&format=html_table&stat_cds=mean_va&date_format=YYYY-MM-DD&rdb_compression=file&submitted_form=parameter_selection_list) is the nearest USGS stream gage to the site. This gage is located upstream of the project site near Vida.. The gage provides stream flow and daily stream flow statistics for the period June 2012 to June, 2014. The mean of the daily mean values in the period of August through November are approximately 3 to 38 cfs. These flows and timings should be considered a rough estimate to provide some estimate of the flow diversion requirements at the project site. It is the Contractor’s responsibility to determine flow diversion requirements.

PART 2: PRODUCTS

2.1 GENERAL

The Contractor will determine the materials required to meet these specifications. Prior to start of work, the Contractor will furnish all labor, materials and equipment, and perform all operations required to design, furnish, install, test, pump, measure, and maintain the diversion and

excavation dewatering equipment, including pumps, peizometers and pre-drainage well point and well systems, ditches, dikes, coffer dams; sandbags, sumps, power supply and distribution; all as required to dewater the steam channel and excavations so that the work can be conducted under controlled conditions. The Contractor will demobilize all diversion and dewatering equipment and materials after completing the irrigation diversion retrofit and fish trap installation.

PART 3: EXECUTION

3.1 GENERAL

It is the intent of these specifications that the river flow should be diverted such that the installation of the Contech structures can be installed in as dry conditions as possible.

3.2 FLOW CHARACTERISTICS

It is the responsibility of the Contractor to evaluate the seasonal flow characteristics of the Redwater River and to size the Diversion and Dewatering measures to accommodate these seasonal flows. During rain events the flow rate in the Redwater River can exceed the seasonal average. The Contractor will be responsible for calculating his own estimate of flow at any given time.

3.3 STREAM DIVERSION

The Contractor will temporarily divert flow in the Redwater River around the location of where the new Contech structures will be installed. The Contractor will take measures to minimize sediment transport during stream diversion. The Contractor will size the diversion system to accommodate flow in the Redwater River. The Contractor will be responsible for modifying the capacity of the diversion system to accommodate variable flows in the Redwater River during the project. All man-made materials used to divert river flow will be removed from the project area and disposed of offsite upon completion of construction.

3.4 DEWATERING

Pumped dewatering is not required. Refer to Protection of the Environment should pumping operations be undertaken by the Contractor.

3.5 REMOVAL OF WATER CONTROL MEASURES

Once work is complete, the Contractor will remove the water control measures and reclaim conditions disturbed as a result of the water control measures.

3.6 SUBMITTALS

Contractor will provide a Control of Water Plan submittal associated with Work covered by this Specification, to include:

1. Anticipated Schedule of Diversion and Dewatering Activities.
2. Shop Drawings depicting Control of Water practices to be implemented by the Contractor.
3. At the request of the Owner's Representative, hydraulic and other calculations showing the adequacy of the Control of Water Plan to meet criteria in Section 3.4 Stream Diversion.

The Control of Water Plan submittals will meet the requirements of the Permits that have been acquired for this project by the Owner. Minimum components of the Control of Water Plan

submittals are specified in this Specification. Failure to comply with this requirement will result in withholding the Notice to Proceed (NTP).

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT
There will be no measurement of activities associated with the Control of Water.

4.2 PAYMENT
Payment for the Control of Water specified in this section will be made based on the lump sum amount stated in the Bid.

SECTION 02240

DEMOLITION

PART 1: GENERAL

1.1 DESCRIPTION
This work consists of removing and disposing of a portion of the existing low water river crossing. The existing crossing is made of concrete and may contain reinforcing steel.

PART 2: PRODUCTS

2.1 GENERAL
The Contractor will provide all materials and equipment in suitable and adequate quantities as required to accomplish the work shown, specified herein, and as required to complete the project.

2.2 ON-SITE EXCAVATED SAND/GRAVEL MATERIAL
As specified in Earthwork.

2.3 COMMON BACKFILL
As specified in Earthwork.

PART 3: EXECUTION

3.1 GENERAL
The location of the structure to be demolished is indicated on the Plans and described herein. Based on the field investigations, it is suspected that the concrete structure contains reinforcing steel. No design or as-built plans of the crossing are available. Depictions of the existing structure shown on the Plans are not based on extensive field verification/investigation. The Contractor will field verify the material and geometric characteristics of the structure. The Contractor will remove the concrete and other material that make up the crossing structure in as large of pieces as is feasible. Care will be taken in order to minimize the downstream loss of materials from the structure. The Contractor will excavate river sand and gravel from above the crossing structure to the elevation specified on the Plans. The excavated material, including concrete, rebar and river sand and gravel, shall be disposed of offsite.

3.2 SEQUENCING
Contractor will provide a Demolition plan to the Owner's Representative. During demolition, the Contractor may choose to construct temporary coffer dams and diversions in order to allow remaining work to be completed under dry conditions. Impounded sediment from directly upstream of the low water crossing may be used to create the coffer dam and diversion. Any temporary coffer dams or diversions will be completely removed after construction is complete.

3.3 DISPOSAL
The Contractor will dispose of all concrete and associated materials offsite. It is the responsibility of the contractor to locate an appropriate location for the material.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

Demolition will be measure on a cubic yard quantity of material removed from the site.

4.2 PAYMENT

Payment for the Demolition specified in this section will be made based on cubic yards of material removed from the site.

SECTION 02710

SEEDING

PART 1: GENERAL

1.1 DESCRIPTION
This work consists of ground surface preparation; furnishing and planting seed on areas of disturbed, bare soil within the project limits as described in these specifications or directed by the Owner's Representative.
The Contractor will make effort to minimize the spread of noxious weeds into the project site.

1.2 SUBMITTALS
Submit to the Owner's Representative applicable seed mixture certifications. Furnish duplicate signed copies of the vendors' statement certifying that each seed lot has been tested by a recognized seed testing laboratory within 6 months of date of delivery. Assure the statement includes: Name and address of laboratory, date of test, lot number for each seed species and then test results including name, percentages of purity and of germination, percentage of weed content for each kind of seed furnished and, for seed mixes, the proportions of each kind of seed.

PART 2: PRODUCTS

2.1 SEED
Furnish seed mixture, free of all prohibited noxious weed seed or any other weed seed prohibited by state or local ordinance. Do not use wet, moldy, or otherwise damaged seed in the work. Seal and label all seed containers to comply with Montana Seed Law and Regulations, if shipped in interstate commerce. Furnish seed in standard containers labeled with the seed name, lot number, net weight, percentages of purity, germination, hard seed, and percentage of maximum weed seed content for each seed species. Furnish seed mixture of the following species:

Seed Name	**% Pure Live Seed**	**Lbs. Per Acre**
Western Wheatgrass	30	*
Bluebunch Wheatgrass	20	*
Hard Fescue	20	*
Slender Wheatgrass	15	*
Green Needlegrass	15	*

* Drilled Rate = 25 lbs/acre, Broadcast and Hydroseed Rate = 50 lbs/acre

PART 3: EXECUTION

3.1 ALLOWABLE SEEDING MONTHS
Perform seeding when the temperature and moisture are favorable to germination and plant growth. Seed after September 15th or according to a timeframe approved by the Owner's Representative. Seeding dates must be approved by the Owner's Representative.

3.2 SEEDBED PREPARATION AND SOWING
Clear the areas to be seeded of all debris, vegetation, and other material determined by the Owner's Representative to be detrimental to the preparation of a seedbed. Once the area is

cleared, disc, harrow, rake, or work the area by other suitable methods, into a smooth, even seedbed. Assure the prepared seedbed surface is firm enough to prevent seed loss from high winds or normal rainfall. If rolling is required, perform rolling before seeding using a suitable roller, of a weight appropriate to the soil conditions. Sow seed using hand broadcaster. Use equipment in good working order. Do not sow seed in winds that prevent proper embedment into the surface.

3.3 CARE OF SEEDED AREAS
Protect all seeded areas from traffic or pedestrian use with warning barricades or other Owner's Representative approved methods.

3.4 CONTROL OF UNDESIRABLE PLANT SPECIES
The Contractor will make reasonable efforts to control the introduction and spreading of undesirable plant species into the project area area. Noxious weeds and other invasive species, include, but are not limited to Canada thistle, Musk thistle, Knapweed, Purple Loosestrife, Houndstongue, and Skeletonweed.

3.5 WARRANTY
The success criteria for areas that have been seeded are as follows.
A. By June 2015, seeded areas will have 60% coverage with planted vegetation and no more than 10% of seeded areas should contain noxious weeds.
B. By June 2016, or termination of the Owner's agreement with the landowner (whichever is first), seeded areas should have > 90% coverage with planted vegetation and noxious weeds occupying < 5% of the seeded area.

PART 4: MEASUREMENT AND PAYMENT

4.1 MEASUREMENT
Seeding will be measured by the square yard and includes seedbed preparation and seeding, complete in place and accepted by the Owner's Representative.

4.2 PAYMENT
Payment for Seeding will be made at the unit price per square yard seeded as stated in the Bid.

SECTION 99999

Contech i-Span Structures

PART 1: GENERAL

1.1 DESCRIPTION

A. This work consists of site preparation (excavation and leveling), backfilling and compaction, and installation of Contech i-Span structures as designated on the project drawings.

PART 2: PRODUCTS

2.1 See construction drawings, sheets 6-9, for product information.

PART 3 : EXECUTION

3.1 See construction drawings, sheets 6-9, for execution requirements

PART 4: MEASUREMENT AND PAYMENT

4.1 GENERAL

A. Contech i-span structures installation will be measured and paid for by the Lump Sum (LPSM) including all labor, equipment, materials, and incidentals required for the completion of the work.

END OF SECTION 99999